



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/604,472      | 06/27/2000  | William R. Van Etten | 65545-0074          | 5091             |

7590 12/27/2004

STEVENS ,DAVIS, MILLER & MOSHER , LLP  
ATTEN: NOREEN O. WELCH, ESQUIRE  
1615 L STREET N.W.  
SUITE 850  
WASHINGTON, DC 20036

EXAMINER

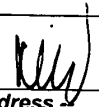
HAQ, NAEEM U

ART UNIT PAPER NUMBER

3625

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                 |   |
|------------------------------|-----------------|-----------------|---|
| <b>Office Action Summary</b> | Application No. | Applicant(s)    |   |
|                              | 09/604,472      | VAN ETEN ET AL. |   |
|                              | Examiner        | Art Unit        |   |
|                              | Naeem Haq       | 3625            |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Amendment***

This action is in response to the Applicants' amendment filed on August 30, 2004. Claims 17-25 are pending and will be considered for examination. Applicants' amendment to claim 17 is sufficient to overcome the objection to claims 22 and 23. The objection is hereby withdrawn.

The Applicants' amendment to the specification is sufficient to overcome the 112, first paragraph rejection of claim 19. This rejection is hereby withdrawn.

### ***Priority***

Applicants' claim to priority to US application 09/348,693 is hereby acknowledged. However, the limitation "...not normally accessible..." in claim 19 lacks proper written description support in the parent application and will not be accorded the filing date of the parent application. The parent application teaches that a buyer accesses the master catalog database (page 7, line 21 – page 8, line 18; page 11, lines 4-6; page 12, lines 18-20; page 18, lines 1-4).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claim 19, this claim recites the limitation "...not normally accessible..." This limitation is a relative limitation which renders the claim indefinite. The Examiner notes that either a database is accessible or it is not accessible to a user. The limitation "...not normally accessible..." is a purely subjective limitation that is not defined by the claim or the specification. Furthermore, one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For examination purposes, the Examiner will assume that the database is accessible to the user since even a database which is "not normally accessible" is at some point accessible to a user.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 17-20, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US Patent 6,014,644) in view of <http://www.research.ibm.com/journal/sj/361/srinivasan.html> "Object persistence in object-oriented applications" hereinafter referred to as IBM.**

Referring to claims 17 and 18, Erickson teaches a procurement system for a buyer to purchase a desired item said system comprising: a first catalog database accessible to said buyer (column 8, lines 28-30; Figure 1, item "18") and a second catalog database (column 8, lines 28-30; Figure 1, item "16"). Erickson does not teach that the first database lacks the desired item. However, Erickson teaches that the buyer may search the first or second database to identify suppliers that offer goods of interest to the buyer (column 8, lines 28-30, lines 51-67; column 12, line 58 – column 13, line 1). Furthermore, the first and second databases do not contain the same data because the buyers and suppliers are allowed to add data into the databases independently of each other (column 3, lines 13-42; column 7, line 46 – column 8, line 27). Finally, Erickson teaches that mechanisms are needed to keep the first and second databases synchronized (column 11, lines 51-56; column 12, lines 30-35). Therefore, the feature of the first database lacking a desired item is obvious in view of Erickson. One of ordinary skill in the art would realize since Erickson places no restriction on when buyers and suppliers are allowed to add data into the databases that these databases

will be out of sync at some point (i.e. there will be data in one database that does not exist in the other database). Thus, Erickson repeatedly stresses the need to keep the databases synchronized. However, Erickson teaches the databases are synchronized on a periodic basis (column 12, lines 9-12; column 17, lines 51-55). Therefore one of ordinary skill in the art would recognize that there are times when the databases are out of sync. Erickson does not teach that each unique item stored within the first and second catalog databases is identified with respect to class, attribute, and value relationships. However, IBM teaches an object-oriented database model that allows data to be captured and stored in a database using object-oriented principles (page 2, paragraph 2; page 3, paragraph 4; page 4, paragraphs 3 and 4). Furthermore, IBM teaches that object-oriented database management systems (OODBMS) use class, attribute, and value relationships to store and identify items with a database (page 6, "Table 1"; pages 7 and 8, "Complex objects"; page 12, "Encapsulation"; page 13, "Inheritance"; Figures 3 and 4). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of IBM into the system of Erickson. One of ordinary skill in the art would have been motivated to do so in order to avoid the impedance mismatch that exists with relation data models and databases, as taught by IBM (page 4, paragraph 4 – page 5, paragraph 2). Erickson does not teach an item selection procedure that relies on said relationships to search for the desired item within the second database when it is not located within the first database. However, IBM teaches that object-oriented databases have an Object Query Language (OQL) that allows for searching a database (page 4,

paragraph 1). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate OQL of IBM into the system of Erickson. One of ordinary skill in the art would have been motivated to do so in order to efficiently search an object-oriented database. Likewise, searching the second database when an item is not located within the first database would also have been obvious to one of ordinary skill in the art at the time of invention because Erickson teaches that a buyer can search both the first and second databases. One of ordinary skill in the art would have been motivated to do so in order to search both databases.

Referring to claims 19 and 20, Erickson teaches a special requisition identifying the desired item (column 13, lines 30-38; column 14, line 56 – column 15, line 11). Erickson does not teach that the requisition uses said class, attribute, and value relationships. However, IBM teaches that object-oriented databases have an Object Query Language (OQL) that allows for searching a database (page 4, paragraph 1). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate OQL of IBM into the system of Erickson. One of ordinary skill in the art would have been motivated to do so in order to efficiently search an object-oriented database. Erickson also teaches a master database (Figure 1, items “16”, “20”) including the desired item, said special requisition being used to search for the desired item in the master database (column 13, lines 30-38; column 14, line 56 – column 15, line 11). Erickson also teaches forwarding the special requisition to a supplier who provides the desired item (column 13, lines 30-38; column 14, line 56 –

column 15, line 11; column 15, lines 30-35). Erickson does not teach that the databases are not updated according to said class, attribute, and value relationships. However, Erickson places no restriction on when the buyers and suppliers can add data into the databases. Therefore, the decision not to update a database would have been obvious to one of ordinary skill in the art, at the time the invention was made. Applicants have not disclosed that not updating a database provides an advantage, is used for a particular purpose or solves a stated problem. Furthermore, one of ordinary skill in the art would have expected Applicants' invention to perform equally well with the teachings of Erickson and IBM because the decision to update or not update a database does not affect the system of the prior art in any way. Therefore, it would have been obvious to one of ordinary skill in this art to modify the prior art to obtain the invention as specified in the claims.

Referring to claim 22, Erickson does not teach that the class relationships are hierarchical among classes. However, IBM teaches that object-oriented databases use principles of object-oriented programming such as inheritance which provides for a hierarchy among classes (page 13, paragraphs 2 and 3). Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of IBM into the system of Erickson. One of ordinary skill in the art would have been motivated to do so in order to efficiently search and maintain an object-oriented database.

Referring to claim 24, Erickson and IBM do not teach that the attributes comprise static, differentiating, and dynamic. However, at the time the invention was made, it



Art Unit: 3625

would have been obvious to one of ordinary skill in the art to incorporate these features into the cited prior art. Applicant has not disclosed that static, differentiating, and dynamic attributes provide an advantage, are used for a particular purpose or solve a stated problem. Furthermore, one of ordinary skill in the art would have expected Applicants' invention to perform equally well with the teachings of the cited prior art because any item has data associated with it which describes the item uniquely. Therefore, it would have been obvious to one of ordinary skill in this art to modify the cited prior art to obtain the invention as specified in the claims.

**Claim 21, 23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (US Patent 6,014,644) in view of <http://www.research.ibm.com/journal/sj/361/srinivasan.html> "Object persistence in object-oriented applications" hereinafter referred to as IBM and further in view of Official Notice.**

Referring to claim 21, the cited prior art does not teach that a parametric search engine performs the item selection procedure (i.e. database query). However, Official Notice is taken that it is old and well known in the art to use a parametric search engine to search a database. Therefore it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate a search engine into the system of Erickson and IBM. One of ordinary skill in the art would have been motivated to do so in order to provide a user with a user-friendly interface for searching a database.

Referring to claims 23 and 25, the cited prior art does not teach that a leaf class is the lowest class in the hierarchy, or that a value relationship is between an attribute to a value relationship. However, Official Notice is taken that is old and well known in the art of object-oriented databases. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate these features into the system of Erickson and IBM. One of ordinary skill in the art would have been motivated to do so in order to exploit the full potential of object-oriented databases.

### ***Response to Arguments***

Applicants' arguments with respect to the 112, second paragraph rejection of claim 19 have been fully considered but they are not persuasive. The Applicants have amended the specification at page 15 to provide written support for the limitation that the master catalog database is not normally accessible to the buyer. This limitation was originally presented in claim 19 of the current application. However, the Examiner notes that in multiple occurrences throughout the specification, the buyer is allowed to access the master catalog database (page 8, line 3 – page 9, line 5; page 13, lines 4 and 5; page 15, lines 15-19; page 17, lines 13-15; page 22, lines 20 and 21, page 23, lines 15-23; page 24, lines 13-15). The specification does not clearly point out the conditions when a buyer is or is not allowed access to the database. Therefore, the negative limitation "...not normally accessible..." is indefinite, and the Examiner maintains the rejection.

Applicants' arguments and amendments with respect to the 112 rejection of claims 23 and 25 have been fully considered and are persuasive. This rejection of claims 23 and 25 has been withdrawn.

Applicants' arguments with respect to claims 17-19 have been fully considered but they are not persuasive. The Applicants have argued that Erickson teaches away from searching the central database. The Examiner disagrees. Erickson teaches that a buyer locates a supplier using the central database (column 8, lines 62-66). The Applicants have also argued that there is no motivation to combine IBM with Erickson. The Examiner disagrees. Erickson teaches a database containing buyer and supplier information (column 7, line 44 – column 8, line 27). Erickson also teaches that this information is stored using a class structure (column 9, lines 38-49). Furthermore, one of ordinary skill in the art of database would recognize that most commercial databases are implemented using either a relational or object-oriented data model. Therefore, one of ordinary skill in the art would look to the IBM disclosure for guidance on implementing the database of Erickson because IBM discusses the benefits that an object-oriented data model provides over a relational data model. For this reason, the Examiner maintains the art rejection.

Applicants' arguments with respect to claim 20 have been fully considered but they are not persuasive. The Applicants have argued that Object Query Language (OQL) is not a special requisition. The Examiner used the Erickson reference and not (OQL) to address the special requisition limitation. The Applicants have also argued that claim 20 recites "...one of said databases being updated..." The Examiner

disagrees. Claim 20 recites "...**lone** of said databases being updated..." (emphasis added). The Examiner interprets this to mean that one or more of the databases is not updated. For this reason, the Examiner maintains the art rejection.

Applicants' arguments with respect to claim 22 have been fully considered but they are not persuasive. Object inheritance hierarchy is not equivalent to the hierarchy among classes. The Examiner disagrees. Claim 22, when read in light of claim 17, recites storing data in a database using a hierarchical class structure. This is what IBM discloses.

Referring to the Applicants' "Summary Of Office Interview", item #3 states the following:

Examiners stated that if one 'can' use object oriented database technology to modify a reference that this is sufficient motivation to modify a reference and therefore sufficient motivation to modify the data structure of the Erickson reference.

This Examiner disagrees with this statement. During the Interview, the Applicants' representative stated that the Examiner's motivation to combine IBM with Erickson (i.e. to avoid impedance mismatch) was improper because it was not the same as the Applicants motivation. The Examiners responded by saying that the motivation to combine need not be the same as the Applicants' motivation so long as the prior art disclosed a different motivation.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naeem Haq whose telephone number is (703)-305-3930. The examiner can normally be reached on M-F 8:00am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wynn W. Coggins can be reached on (703)-308-1344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Naeem Haq**, Patent Examiner  
Art Unit 3625

December 19, 2004



**WYNN W. COGGINS**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600